

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 03-05-2010		2. REPORT TYPE FINAL		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE  PREPARING NAVY OFFICERS FOR LEADERSHIP AT THE OPERATIONAL LEVEL OF WAR				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)  Eric J. Madonia, LT, USN  Advised by: Professor Paul A. Povlock, JMO Dept.				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES A paper submitted to the Naval War College faculty in partial satisfaction of the requirements of the Joint Military Operations Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.					
14. ABSTRACT  No officer is inherently prepared to effectively apply and orchestrate military forces through out the broad spectrums of space and time germane to the operational level of war. The Navy's Professional Military Education (PME) curriculum must, therefore, prepare officers for the challenges and responsibilities of such leadership. The U.S. Naval War College has a rich history of preparing officers who would eventually excel at the operational level of war. Best exhibited by what known as the applicatory method during the Interwar period, students were ingrained to think critically according the decision-making principles within <i>The Estimate of the Situation</i> and then applied and tested their decision-making abilities to wargames. Validated by the Pacific Campaign successes of those officers who had previously benefited from this War College preparation, this combined and integrated educational focus is the best means of preparing officers to lead at the operational level. Maritime PME should be refocused accordingly.					
15. SUBJECT TERMS Leadership, Operational Level of War, <i>Estimate of the Situation</i> , Wargaming, U.S. Naval War College, Professional Military Education					
16. SECURITY CLASSIFICATION OF: UNCLASSIFIED			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES  26	19a. NAME OF RESPONSIBLE PERSON Chairman, JMO Department
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code) 401-841-3414

**NAVAL WAR COLLEGE**  
**Newport, R.I.**



**PREPARING NAVY OFFICERS FOR LEADERSHIP**  
**AT THE OPERATIONAL LEVEL OF WAR**

by

**Eric J. Madonia**  
**LT, United States Navy**

**A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.**

**Signature: \_\_\_\_\_**

**3 May 2010**

## CONTENTS

Introduction	1
Background	2
<i>Estimate of the Situation</i>	3
Wargaming	8
Challenges	13
Recommendations	16
Conclusion	17
Selected Bibliography	22

## **ABSTRACT**

No officer is inherently prepared to effectively apply and orchestrate military forces through out the broad spectrums of space and time germane to the operational level of war. The Navy's Professional Military Education (PME) curriculum must, therefore, prepare officers for the challenges and responsibilities of such leadership. The U.S. Naval War College has a rich history of preparing officers who would eventually excel at the operational level of war. Best exhibited by what known as the applicatory method during the Interwar period, students were ingrained to think critically according the decision-making principles within *The Estimate of the Situation* and then applied and tested their decision-making abilities to wargames. Validated by the Pacific Campaign successes of those officers who had previously benefited from this War College preparation, this combined and integrated educational focus is the best means of preparing officers to lead at the operational level. Maritime PME should be refocused accordingly.

## INTRODUCTION

Determining how the U.S. Navy's professional military education (PME) system may most effectively prepare its officers for successful leadership at the operational level of war is of great importance to the nation. A primary standard for such an analysis is the Navy's past experience of preparing in peacetime those officers who would eventually excel at operational level of war. The emphasis for officer preparation must be placed upon leadership, not exclusively on command billets. Not only does the Navy need officers prepared to command forces at the operational level of war, it also needs officers prepared to lead as key members of Joint military staffs who understand how the operational level pertains to the maritime environment. Every commander is supported and advised to varying degrees by his staff. Senior naval staff officers must, therefore, have a firm understanding of the operational level of war in its maritime context, and be able to influence the organization and advise the commander accordingly.

History, particularly the beginning of the Second World War, indicates that what best prepares peacetime officers to succeed are not necessarily the same qualities requisite for preparing effective wartime leadership.<sup>1</sup> Moreover, many accomplished and "even brilliant tactical commanders have utterly failed" to effectively lead at the operational level of war because they never gained or developed the "broad perspective necessary to effectively use forces under their command to accomplish operational and strategic objectives."<sup>2</sup> Expertise in specific areas of combat such as rapid decision-making, technical proficiency, and swift movements facilitate tactical success. However, effective leadership at the operational level of war necessitates "an increasing need for a broader grasp of the complexities [of war], for systematic analysis, and for sound judgment."<sup>3</sup> These necessities are not innate to any naval

officer; they must be the subject of classroom instruction and ingrained through practical application. Therefore, PME must prepare officers appropriately and adequately. Naval officers are best prepared to lead and apply military forces at the operational level of war by honing their abilities to think critically within a logical decision-making framework which includes applying their decision-making capabilities to, as well as being tested by, wargames.

## **BACKGROUND**

During the Second World War, Admiral Raymond Spruance commanded hundreds of ships, thousands of aircraft, and tens of thousands of personnel. Under his leadership, the U.S. Fifth Fleet fought across millions of square miles of ocean, much of which was nearly seven thousand miles from American shores.<sup>4</sup> In the last sixty-five years, however, no U.S. naval officer has experienced comparable leadership responsibilities and stresses. Naval Warfare Publication (NWP) 3-32 *Maritime Operations at the Operational Level of War*, acknowledges “there has been little opportunity for the Navy to plan and execute a major operation or campaign since World War II.”<sup>5</sup> Consequently, “the operational art and command and control capabilities associated with leadership at the maritime operational level have not had the opportunities to evolve and adapt to the modern operational environment.”<sup>6</sup> One reasonable implication from this explicit admission is that such concerns regarding the maritime operational level extend to the Navy’s senior leadership: the Navy has a dearth of leadership experience, and thus expertise, at the operational level of war.

Scarcity of opportunity is not the only reason for a lack of leadership expertise at the operational level of war. Others suggest that Navy culture is plagued with an almost exclusive focus on tactics and capabilities-based thinking. Citing an over-reliance on technology and a lack of critical thinking for employing “several naval combat arms or

combined arms tactics,” one expert submits that the Navy’s culture is obsessed with tactics and is generally beset by a “lack of operational thinking.”<sup>7</sup> Navy officers, like any group of individuals, are products of their culture, so one cannot reasonably expect a marked improvement in preparation and readiness to lead at the operational level of war without a corresponding cultural change.

The cradle for such a change as well as for overcoming this experience deficit is the Navy’s PME system, specifically, the U.S. Naval War College. The War College’s central emphasis should be preparing its students, the future Naval and Joint leaders, for the challenges and responsibilities of the operational level of war. The best method of such preparation is to inculcate into students a logical decision-making process, and then expose students to wargaming through which they are required to apply classroom instruction and forced to make challenging decisions in a pressurized environment. Analogous to what was known as the “applicatory method” during the Interwar period, students should gain an understanding of decision-making principles in classrooms, continue learning by applying those principles in wargame situations, and finally, be tested through wargames.”<sup>8</sup> This combined and integrated educational focus is the most effective means of preparing officers to lead at the operational level of war.

### ***ESTIMATE OF THE SITUATION***

For much of the Naval War College’s history, the *Estimate of the Situation*, or the *Estimate*, served as the fundamental framework for teaching naval officers how to think critically and arrive at sound military decisions. First introduced to the College in 1910 during a series of lectures, the *Estimate* inculcated into students a model of logical and analytical thinking, specifically for wartime situations. Emphasizing the commander’s ability

to respond quickly and accurately, the *Estimate* sought to develop an officer's mental acuity and intellectual rigor in order to use his available forces in the best possible manner.<sup>9</sup> While President of the War College in 1913, Admiral Austin Knight, summarized the *Estimate's* utility as a "reasoned solution of a problem where each step in the process approaches a decision, [which] without those steps could be arrived at by accident only."<sup>10</sup> When Admiral William Sims assumed the College's presidency four years later, his "educational goal was to instill in students a habit of mind which applied the basic principles [the *Estimate's* three cardinal principles] 'logically,' correctly and rapidly to each situation that may arise."<sup>11</sup>

The *Estimate's* first major alteration occurred when Admiral Edward Kalbfus modified it when he assumed the College's presidency in 1934. Believing that "to exercise command efficiently an officer must understand the fundamentals of war," Kalbfus sought to include "everything that is necessary to a logical estimate from the broadest standpoint."<sup>12</sup> Renamed *Sound Military Decision*, Kalbfus' revision contained all the tenets of the *Estimate* in addition to a lengthy, and largely theoretical, approach to the fundamentals of war. The second major change in the life of the *Estimate* would directly follow World War Two. Having disagreed with Kalbfus' revision while serving on the War College faculty in 1936, Spruance would remove *Sound Military Decision* from the War College curriculum when he became president ten years later. Spruance's contention was only with the peculiarities unique to Kalbfus' *Sound Military Decision*, not the logic framed by the *Estimate*. In fact, Admiral Spruance believed that the College should "show that there are certain fundamentals, the understanding of which assists a commander in the orderly thinking and planning necessary to solve a military problem."<sup>13</sup> To that end, he insisted that the *Estimate* be captured in a standardized naval publication and therefore not subject to revision by each



change of command at the War College.<sup>14</sup> The result was the 1948 *Navy Manual of Operational Planning*, which “attempted to combine in the clearest and simplest terms, the various existing instructions in effect for planning Naval Operations.”<sup>15</sup>

The *Estimate*’s centrality steadily diminished through out the 1950s and 1960s as the logic within the naval operational culture became increasingly determined by countering specific threats instead of achieving defined missions.<sup>16</sup> Further diminishing the *Estimate*’s prominence, the College curriculum shifted from “planning” to “tactics” during the 1970s.<sup>17</sup> Finally, “the loss of a systematic decision-making process began in the 1980s when the Joint Chiefs of Staff cancelled JCS publication 2” which had clearly presented the *Estimate*’s logic and subsequent “Joint planning documents focused more on format than on logic.”<sup>18</sup>

The *Estimate* gained its greatest validation from those officers who successfully commanded at the operational level of war during the Pacific campaign. When the officers who would lead the Pacific Campaign studied at the War College during the Interwar years, the *Estimate* was used “in conjunction with virtually every medium of instruction.”<sup>19</sup> Some scholars argue that the Naval War College’s greatest contribution to the war was instilling into naval officers a “methodology for problem solving.”<sup>20</sup> In fact, when America entered the war, all but of one the Navy’s admirals who were qualified to command at sea were War College graduates and had been conditioned to think within the intellectual framework of the *Estimate of the Situation*.<sup>21</sup> Admiral Frank Jack Fletcher famously remarked that “after an action is over, people talk a lot about how the decisions were deliberately reached, but actually there’s always a hell of a lot of groping around.”<sup>22</sup> Historians contend, however, that Fletcher’s understanding of fundamental doctrine and method brought great clarity to the “groping around,” leading to Fletcher’s successes at the Battles of Coral Sea, Midway, and

Eastern Solomons.<sup>23</sup> This doctrinal and methodological understanding was ingrained at the War College by the *Estimate*.

Well beyond facilitating clarity for operational leaders and commanders, faithfulness to the *Estimate*'s critical elements were manifested and, in some measure, responsible for the outcomes of World War Two's five carrier battles.<sup>24</sup> The results of the Battles of the Coral Sea, Midway, the Eastern Solomons, Santa Cruz, and the Philippine Sea, invariably hinged upon pivotal decisions made by those leading Allied forces. Analyzing and evaluating the decision processes that naval commander's employed during each of the battles "reinforces that adherence to the tenets of...*Sound Military Decision* [were] universally present and indeed important to their reaction to stressful and demanding battle conditions."<sup>25</sup> Although countless factors determine a battle's outcome, no other singular influence weighs more heavily than the commander's ability to critically think and arrive at sound decisions.

Instructing and preparing leaders to reach sound decisions in wartime is not necessarily current planning doctrine's purpose. Present planning publications focus on facilitating staff members and emphasize deliberate planning; whereas the *Estimate* focused on preparing commanders to think after the planning transition had occurred and execution commenced.<sup>26</sup> The critical difference is that deliberate planning creates a cadre of officers familiar with planning and specific plans, but the *Estimate* sought to instill a mental process through which an officer could direct assigned forces toward a common objective when the planning assumptions had quickly altered or the pace of operations would not allow thorough planning. Helmuth von Moltke's often-repeated axiom, "no campaign plan survives first contact with the enemy," demands that leaders have an ingrained logical thought process to quickly and accurately make crucial decisions without the benefits of extensive planning

periods. The Pacific Campaign offers numerous examples in which time restraints did not allow deliberate planning. Perhaps most prominent is the astonishingly brief timeline between the Battles of Coral Sea and Midway. In the time between the two battles, and during Midway, Admiral's Nimitz, Fletcher, and Spruance all made momentous decisions based on limited intelligence, within an extremely compressed force preparation window, without the advantages of extensive planning periods, and they did so while employing the Navy's newest attack formation, the carrier task force.<sup>27</sup>

Not only do current planning manuals have an emphasis different from that of the *Estimate's*, they also have less utility for preparing operational level leaders for quick and logical decision-making. The *Estimate* contains a superior method of teaching logic than that of current joint-doctrine. While certainly valid and useful in their own right, many of the current planning publications may be perceived to be “merely instructions for filling out the joint formats rather than being clear expositions of the essence of the logic to be applied.”<sup>28</sup> The current War College planning framework, Joint Operational Planning Process (JOPP), is founded upon Naval Warfare Publication 5-01 *Navy Planning*, Joint Publication 3-0 *Joint Operations*, and Joint Publication 5-0 *Joint Operational Planning*, all of which are of the deliberate planning nature and focus on specific formatting.<sup>29</sup> Not only are War College students not learning the *Estimate's* logic, they are not well instructed in these planning processes. Although a culminating *Capstone* exercise reinforces JOPP classroom lessons, the 2010 War College *Joint Military Operations* (JMO) syllabus affords only eleven days to specific JOPP instruction.<sup>30</sup> This would be imprudent even if it were not true that the JMO course is generally the first time that intermediate level Navy officers are exposed to formal military planning.

The Naval War College's goal is, and has always been, to develop logical thinking, not just an analytical planning process. In a 1934 memorandum, Admiral Kalbfus expressed that the War College curriculum should address the totality of logical decision-making, such that it would "remove from the mind of the student any idea of a rule of thumb or a check-off sheet."<sup>31</sup> Similarly, when Admiral Spruance returned to the War College in 1946, his foremost intent was that students be developed to attain that which is more important than learning a process: "comprehensive thinking and clarity of purpose."<sup>32</sup> The *Estimate* delivered to students the framework for developing such thinking.

### **WARGAMING**

Admiral James Stockdale's belief that "the greatest educational fallacy is that you can get it without stress" is extremely relevant to educating leaders.<sup>33</sup> Training students in the *Estimate*'s decision-making framework is not complete without providing students opportunities to apply the classroom instruction and be tested to it during wargames. Indeed, much of the ingraining process occurs during application and testing periods. While president of the Naval War College during the Interwar years, Admiral William Sims stressed the need for wargaming by relaying countless stories of seeing officers with admirable reputations and more than two decades of experience begin to conduct maneuvers on a game board, only to "see the lack of knowledge [they had] of the proper tactics and strategy."<sup>34</sup> Likewise, in his opening address to the War College class of 1931, Admiral Harris Laning, remarked that through "wargames, conducted in miniature where they can see the whole picture, the student learns how to apply to actual war situations the principles he has learned through his study."<sup>35</sup> Officers unexposed to the stresses of making decisions when the choices involve

orchestrating vast forces through space and time, cannot be assumed to be prepared for leadership at the operational level of war.

Certainly, both the *Estimate's* decision-making principles and operational art can be appreciated and understood in a classroom; but mastery occurs only when principles are applied to specific scenarios under stressful conditions with attached risk. In fact, wargaming delivers its greatest benefit from the risk derived from an active enemy. As McCarty-Little observed, “the great secret of [wargaming’s] power lies in the existence of the enemy, a live vigorous enemy in the next room waiting feverishly to take advantage of any of our mistakes.”<sup>36</sup> Added to the pressures of appearing foolish before peers or seniors, losing credibility, or losing a competition, wargaming creates a taxing environment in which students are strained, tested, and refined. Wargaming is not an end of itself, but rather, a means by which students achieve the learning that only occurs when decision-making principles are applied to realistic problems. Thus, wargaming should be an integral aspect of educating officers and extensively employed to teach students the *Estimate's* logic.

Wargaming provides officers experiences and exposure that cannot be otherwise obtained. These essentials, experience and exposure, are at the heart of the dilemma of preparing Navy officers for leadership at the operational level of war. Unlike preparing officers for tactical command of a ship, submarine, or aircraft squadron, sufficient leadership experience at the operational level is unavailable because of the grand scope of forces, time, and space involved. Wargaming does not discount any other aspect of “on the job” training and experience officers receive throughout their careers. Such training is crucial; however, through the normal course of their professions, naval officers will gain very little, if any, experience necessary for leading at operational level of war. Wargaming helps bridge this

crucial gap by allowing students to “better understand the principles and limitations by which military command could be exercised under a wide variety of real or hypothetical past, present, or future conditions.”<sup>37</sup> Furthermore, wargames allow leaders to “experience decision-making under conditions that are difficult or impossible to reproduce in peacetime.”<sup>38</sup> Although never more than an approximation of experience, wargaming is the best avenue towards exposing officers to the responsibilities and stresses unique to operational level leadership.

The history of wargaming at the War College illustrates how this teaching tool has been instrumental and beneficial to teaching naval officers to accurately arrive at sound decisions. Beginning at the War College in 1894 with Lieutenant William McCarty-Little’s lectures and proposals, wargaming quickly became an essential aspect of the curriculum. McCarty-Little designed games of varying scopes (ship versus ship, Fleet Tactical, and Strategic<sup>39</sup>), all of which were designed to educate and expose officers to decision situations they were unlikely to encounter in peacetime.<sup>40</sup> When Admiral Sims resumed the War College presidency in 1919, he invigorated the College’s emphasis on teaching and testing officers through wargames. Sims’ strong feelings about wargaming’s indispensable place in a naval officer’s development are underscored in a 1923 article, in which he wrote: “There is no other service [training tool] in the career of a naval officer that can possibly afford this essential training. In no other way can this training be had except” by wargaming.<sup>41</sup>

Wargaming, as it allowed students to apply the *Estimate*’s logic, has been described as the essence of the War College’s education during the Interwar years. How well officers who eventually exercised operational leadership during the Second World War would have performed had they not benefited from their War College experience is debatable. However,

so great was Admiral Spruance's recognition of the value of his wargaming experience that when he assumed the presidency in 1946, he described wargaming as "the most important part of the entire curriculum."<sup>42</sup> Though much of the acclaim received after the war was directed toward developing war plans, wargaming's highest, and often unspoken, praise is due to how it prepared naval officers for future leadership.

For example, Admiral Nimitz's praise for the College's wargaming is perhaps the most renowned recognition that wargaming has ever received: "The war with Japan has been [enacted] in the game room here by so many people and in so many different ways that nothing that happened during the war was a surprise—absolutely nothing except the kamikaze tactics towards the end of the war; we had not visualized those."<sup>43</sup> This acclaim, however, does not stop with tactics and plans. The preparatory benefits that wargaming delivered to tacticians and planners also extended to those officers who would eventually lead the major operations. Through exposure and being forced to think through decisions distinct to the impending Pacific Campaign, leaders gained familiarity and an understanding of the challenges they would encounter. Leaders also learned to think through problems that would differ from their expectations in addition to gaining an appreciation for the consequences of their decisions.

For more than a decade after the Second World War ended, the College continued to focus wargaming on education, and increasingly "emphasized operations at the level of task groups and higher" in order to expose students to more challenging scenarios in which their decision-making abilities would be tested.<sup>44</sup> Though wargaming never completely lost its place in the curriculum, during the 1960s it was plagued by a mandated "association with the newer quantitative analytical techniques of operations research and analysis," directed by

Secretary of Defense Robert McNamara and his “whiz kids.”<sup>45</sup> Beginning in 1972, wargaming was again focused upon training individual officers to the College’s decision-making framework during Admiral Stansfield Turner’s War College presidency. Turner sought to impart to students the aptitude “to reason through problems” and “deal with uncertainty.” Accordingly, he demanded that “gaming techniques allow more students the chance to command large formations.”<sup>46</sup>

Wargaming at the College received additional educational emphasis in the mid-1970s while Admiral Isaac Kidd served as Commander in Chief, U.S. Atlantic Fleet. Kidd, who participated in wargames while commanding a Destroyer Flotilla, “was concerned about the fact that his principal subordinates, including senior flag officers, lacked extensive real-world experience in the type of complex military decision-making environment they would face in a crisis or wartime situation.”<sup>47</sup> The result of Kidd’s directive to develop a method of “exposing [them] to stressful decision-making situations in a complex Joint operating environment,” was a new system of wargaming at the College, the Tactical Command Readiness Program (TCRP).<sup>48</sup> Designed to “incorporate the stress of decision-making under rigid time constraints,” TCRP not only exposed senior officer to scenarios at the operational level of war, but also tested how well they performed.<sup>49</sup> The TCRP gradually “progressed from an orientation to an engagement-level problem, then to a full-scale battle, and finally to a broad campaign,” allowing officers to adjust to each level of ensuing activity and more fully understand the “complex elements of their operational responsibilities.”<sup>50</sup>

In 1981, the pendulum of wargaming’s focus swayed away from educating and exposing officers toward serving the fleet writ large when former Under Secretary of the Navy Robert Murray was made head of the newly established Center for Naval Warfare Studies. He



argued that the War College's wargaming "wasn't being used constructively enough for the Navy" and eventually "expanded the role of the wargaming center into other aspects of the Navy's planning and development processes."<sup>51</sup> Murray would lead the way for a new concept for the College's wargaming that would support all fleets, in addition to arguing "real-life questions of strategy and tactics, test real war plans, and develop new concepts of operation."<sup>52</sup> While these emphases were beneficial, the opportunity cost proved to be a diminution of wargaming's original purpose at the Naval War College.

Most current wargaming is used for validating command and control constructs, weapon system limitations, and other functions which do not emphasize training individual officers.<sup>53</sup> These wargaming purposes are indeed compelling and worthwhile. Nevertheless, such emphasis has largely excluded an even more important wargaming purpose: preparing those operational leaders, without whom, all strategies, tactics, and capabilities are meaningless.

## **CHALLENGES**

Challenges to reviving the mental framework that embodies the *Estimate* in addition to directing wargaming's emphasis on educational purposes are numerous and formidable. Among the foremost challenges is the necessity of assembling a core of instructors and administrators who have both the operational expertise to teach the *Estimate* as well as the tactical prowess to offer decision-making scenarios relevant to students. Among other challenges are Joint requirements. Maritime PME institutions must meet all Joint educational requirements, which would undoubtedly strain the War College to reinstitute the *Estimate* into its curriculum. Also, most War College students have already established internal tactical level decision-making processes and will inevitably resist attempts to change their thinking patterns. Additionally, a mindset that has been developed during a period without

war, or at least without extensive naval combat, will not necessarily recognize the need to instill the *Estimate's* logic into PME's curriculum. Within a peacetime Navy, officers can be promoted to senior ranks having never encountered a need for such a decision-making framework. Consequently, senior officers may falsely assume that the *Estimate* is either irrelevant or unnecessary. This may mirror a broader challenge in the Navy's culture which, when considering current War College enrollments, likely values Fleet experience significantly more than professional education.

Admittedly, the *Estimate* may not be the ideal logical or formal framework for approaching current irregular and unconventional problems that confront today's Navy.<sup>54</sup> Current military problems seem to consistently gravitate to the unconventional margin of the range of military operations (ROMO). Exactly how applicable the *Estimate's* logic is to these challenges is contentious. Nevertheless, two reasons validate reinstituting the *Estimate* within the Navy's PME, even after considering the differences between the Navy's current operational atmosphere and that of the Interwar years. First, the *Estimate's* foremost intent is to teach officers to think critically, analyze a situation, and make sound decisions. Unconventional and irregular problems require more critical thinking, not less. So although designed to counter a conventional enemy, the *Estimate's* emphasis is still on thoughtfully arriving at decisions, and thus it will only benefit officers presented with complex problems. The irregular portion of the ROMO demands exactly that which the *Estimate* has historically proven to deliver: critically thinking and adaptive officers.

Secondly, the Navy will never lose the obligation to maintain a dominant and prepared conventional fighting force with which to control the seas. This force necessarily needs officers ready to lead and command it at the highest levels of war—the *Estimate* is central to

this enduring demand for preparing leaders. Should the Navy's conventional ability dwindle, irregular problems will be merely thorns in the side compared to an adversary's ability to match U.S. naval forces and deliver defeats comparable to those delivered upon Japan's World War Two fighting fleets. In fact, the Navy's overwhelming conventional dominance is the reason that enemies attack along the ROMO's unconventional periphery. Such an overwhelming conventional naval force must have leaders prepared to lead and employ it, especially at the operational level of war.

Beneficial wargaming is not an easy endeavor. Wargaming is not a science and is "consistently misunderstood because of a failure to reconcile the fundamental ambiguities of wargaming, to understand the nature of the tool."<sup>55</sup> Wargame developers must have a clear understanding about war's principles as well as system capabilities. Wargaming must incorporate historic lessons learned, precise analysis, and current operational information "in a continuous cycle of research that allows each method to contribute what it does best to the ongoing process of understanding reality."<sup>56</sup> Further still, wargame scenarios should include current influences such as security cooperation exercises, social and cultural effects, and economic strains. Students must approach games with sobriety and commitment. Also, students must have a sense of humility and willingness to learn, which may be more challenging than expected. War College students have already demonstrated professional competence and some have had successful tactical command. In short, producing proper and beneficial wargaming is hard, and if not done well, is hardly worth doing.<sup>57</sup>

## RECOMMENDATIONS

During his 1919 War College graduation address, Admiral Sims stated that the College's goal is "not only to develop and define the principles of naval warfare, but to indicate the methods by which these principles may be applied with maximum success."<sup>58</sup> PME system can profit from those methods which have previously successfully prepared leaders to lead at the operational level of war. The Navy's PME institution's primary objective should be for students to comprehend the logic contained in the *Estimate*. As Admiral Kalbfus wrote in a 1936 letter, the *Estimate's* "fundamentals should be fed gradually to the student officer" to prevent only superficial comprehension or fundamental misunderstandings.<sup>59</sup>

The goal is not for students to simply learn a decision-making process, but also to apply intellectual rigor within a logical framework. The process is the science but operational art lies in the application. This recommendation is not for any new pattern of critical thought or logical analysis to problem solving, but simply a call to reapply what has yielded success for past generations. Despite years of dilution, Admiral Spruance's planning publication was revised to include the essential logic of the *Estimate* and exists in a 1987 draft form as NWP 11 *Naval Operational Planning*.<sup>60</sup> The *Estimate's* logic remains accessible and wargaming remains a robust capability at the War College—the fundamental need is for a shift in the curriculum's emphasis. The Navy's PME should focus on the combined educational method of aligning the curriculum to the *Estimate* and refocusing wargaming on educating officers.

In addition to curriculum recommendations, the Navy should continue using wargaming to expose and educate senior naval officers throughout their careers, particularly as they approach and enter Flag rank. For example, wargame participation can be included as temporary assigned duty immediately preceding or following command tours. After

successfully completing O-5 command, before and after O-6 command, and prior to O-7 command, officers should participate in wargames geared to educate, expose, and generally prepare officers for operational leadership. By doing so, officers will continue their professional development by refining their decision-making skills, learning from one another, and incorporating the most recent lessons learned from the Fleet. Furthermore, this process will help, as one current Flag officer has expressed, continually “expose O-5s to [the operational level of war], train O-6’s to it, and test O-7s to it.”<sup>61</sup>

## **CONCLUSION**

Today’s need for the U.S. Navy to prepare officers to lead at the operational level of war is as relevant as at any other time in America’s history. The Navy’s PME must replicate in current generations of naval leaders what was accomplished by its predecessor in the years approaching World War Two. Namely, maritime PME must transform officers into “elite intellectual leaders capable of unitary concepts of action and acceptance of calculated risk [by] honing an analytical mind-set capable of reacting to rapidly changing circumstances and formulating sound military decisions.”<sup>62</sup> No officer is innately prepared to think through problems presented by the operational level of war. Although Admiral Spruance was gifted with a highly capable mind, his intellectual abilities were refined and honed to systematically approach and solve the complexities of combat through exposure to comparable rigors in classrooms and wargames. History has verified that the applicatory method—inculcating into students a logical framework for making decisions and continuing instruction by allowing students to apply and test their decisions in wargaming—is the best preparation for Navy officers to assume the highest levels of wartime leadership.

## NOTES

- 
1. Thomas B. Buell, *The Quiet Warrior: A Biography of Admiral Raymond A. Spruance* (Annapolis, MD: Naval Institute Press, 1987), 55.
  2. Milan N. Vego, *Joint Operational Warfare* (Newport, RI: U.S. Naval War College, 2009), X-5.
  3. Frank M. Snyder, interview by the author, 23 April 2010.
  4. Thomas B. Buell, *The Quiet Warrior: A Biography of Admiral Raymond A. Spruance*, xxix.
  5. Chief of Naval Operations, *Maritime Operations at the Operational Level of War*. Naval Warfare Publication (NWP) 3-32 (Washington, DC: Department of the Navy, CNO, 2008), 1-3.
  6. Ibid.
  7. Milan N. Vego, "Obsessed with Tactics." *Armed Forces Journal*, May, 2008.  
<http://www.afji.com/2008/05/3434637> (accessed 20 February 2010).
  8. Frank M. Snyder, Introduction, *Sound Military Decision* (Annapolis, MD: Naval Institute Press, 1992) XXVI.
  9. Doug V. Smith, interview by the author, 15 April 2010.
  10. John B. Hattendorf, B. Mitchell Simpson, III, and John R. Wadleigh, *Sailors and Scholars: The Centennial History of the U.S. Naval War College* (Newport, RI: Naval War College Press, 1984), 155.
  11. U.S. Naval War College, *Commander's Estimate of the Situation: Instructional Worksheet for In-class Work / War Gaming* (Joint Military Operations Department, Naval War College (NWC) 4038, Newport, RI: June, 1995, Revised March, 1996), ii.
  12. John B. Hattendorf, *Sailors and Scholars: The Centennial History of the U.S. Naval War College*, 169.
  13. Thomas B. Buell, *The Quiet Warrior: A Biography of Admiral Raymond A. Spruance*, 420.
  14. Frank M. Snyder, Introduction, *Sound Military Decision*, XXIV.
  15. Chief of Naval Operations, *Naval Manual of Operational Planning* (Washington, DC: Department of the Navy, CNO, 1948) iii.

- 
16. Frank M. Snyder, Introduction, *Sound Military Decision*, XXII.
17. Ibid.
18. Frank M. Snyder, interview by the author, 23 April 2010.
19. Doug V. Smith, *Carrier Battles: Command Decision in Harm's Way* (Annapolis, MD: Naval Institute Press, 2006), 245.
20. John B. Hattendorf, *Sailors and Scholars: The Centennial History of the U.S. Naval War College*, 161.
21. Ibid.
22. John B. Lundstrom, *Black Shoe Carrier Admiral: Frank Jack Fletcher at Coral Sea, Midway, and Guadalcanal* (Annapolis, MD: Naval Institute Press, 2006), XVII.
23. Ibid.
24. Doug V. Smith, *Carrier Battles: Command Decision in Harm's Way*, 244.
25. Ibid., 245.
26. Doug V. Smith, interview by the author, 15 April 2010.
27. Ibid., 30 April 2010.
28. Frank M. Snyder, Introduction, *Sound Military Decision*, XXIII.
29. U.S. Naval War College, *Joint Operation Planning Process (JOPP): Instructional Workbook for In-class Work/Wargaming* (Joint Military Operations Department, Naval War College (NWC) 4111H, Newport, RI: 2008), i.
30. U.S. Naval War College, "Joint Maritime Operations Syllabus, February 2010," (Joint Military Operations Department, Naval War College. Newport, RI: 2010), 371.
31. Frank M. Snyder, Introduction, *Sound Military Decision*, XXV.
32. Hughes, Wayne P., Jr., "Clear Purpose, Comprehensive Execution: Raymond Ames Spruance (1886-1969)." *Naval War College Review*, 22 September 2009.  
<http://www.usnwc.edu/Publications/Naval-War-College-Review/2009---Autumn.aspx>  
(accessed 5 March 2010).

- 
33. James B. Stockdale, *Thoughts of a Philosophical Fighter Pilot* (Stanford, CA: Hoover Institution Press, 1995), 26.
34. Doug V. Smith, *Carrier Battles: Command Decision in Harm's Way*, 246.
35. Ibid., 35.
36. Peter Pellegrino, "What Is a Two-Sided Game?" U.S. Naval War College Faculty Blog, 27 April 2010. <http://www.usnwc.edu/Research---Gaming/War-Gaming/Faculty-Blog.aspx> (accessed 28 April 2010).
37. Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists* (Annapolis, MD: Naval Institute Press, 1990), 9.
38. Ibid., 9.
39. Perla explains that the "Fleet Tactical game dealt with the maneuvers and engagement of two competing forces already in contact with each other [while] the Strategic Game examined the wider dispositions and operations of fleets involved in a major campaign."
40. Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists*, 65-66.
41. Ibid., 70-71.
42. Thomas B. Buell, *The Quiet Warrior: A Biography of Admiral Raymond A. Spruance*, 58 & 421.
43. Donald C. Winter, Secretary of Navy. Current Strategy Forum address. Naval War College, Newport, RI, 13 June 2006.
44. Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists*, 77.
45. Ibid., 84.
46. Ibid., 89.
47. Ibid., 95.
48. Ibid.
49. Ibid., 97.
50. Ibid., 96.
51. Ibid., 98.



---

52. Ibid., 100.

53. William Murray (War College faculty), interview by the author, 1 April 2010.

54. John D. Waghelstein and Donald Chisholm, *Analyzing Insurgency*, Newport, RI: Navy War College Press, 2006.

55. Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists*, 2.

56. Ibid., 11.

57. William Murray (War College faculty), interview by the author, 1 April 2010.

58. Doug V. Smith, *Carrier Battles: Command Decision in Harm's Way*, 34.

59. Frank M. Snyder, Introduction, *Sound Military Decision*, XXXIV.

60. Frank M. Snyder, interview by the author, 23 April 2010. Draft copy obtained from Snyder.

61. Scott H. Swift, USN (J-3, PACOM), telephone interview by the author, 10 April 2010.

62. Doug V. Smith, *Carrier Battles: Command Decision in Harm's Way*, 33.

---

## SELECTED BIBLIOGRAPHY

- Buell, Thomas B. *The Quiet Warrior: A Biography of Admiral Raymond A. Spruance*. Annapolis, MD: Naval Institute Press, 1987.
- Hattendorf, John B., B. Mitchell Simpson, III, and John R. Wadleigh. *Sailors and Scholars: The Centennial History of the U.S. Naval War College*. Newport, RI: Naval War College Press, 1984.
- Hughes, Wayne P., Jr. "Clear Purpose, Comprehensive Execution: Raymond Ames Spruance (1886-1969)." *Naval War College Review*, 22 September 2009.  
<http://www.usnwc.edu/Publications/Naval-War-College-Review/2009---Autumn.aspx>  
(accessed 5 March 2010).
- Lundstrom, John B. *Black Shoe Carrier Admiral: Frank Jack Fletcher at Coral Sea, Midway, and Guadalcanal*. Annapolis, MD: Naval Institute Press, 2006.
- Pellegrino, Peter. "What Is a Two-Sided Game?" U.S. Naval War College Faculty Blog, 27 April 2010. <http://www.usnwc.edu/Research---Gaming/War-Gaming/Faculty-Blog.aspx> (accessed 28 April 2010).
- Perla, Peter P. *The Art of Wargaming: A Guide for Professionals and Hobbyists*. Annapolis, MD: Naval Institute Press, 1990.
- Smith, Doug V. *Carrier Battles: Command Decision in Harm's Way*. Annapolis, MD: Naval Institute Press, 2006.
- Snyder, Frank M. Introduction, *Sound Military Decision*. Annapolis, MD: Naval Institute Press, 1992.
- Stockdale, James B. *Thoughts of a Philosophical Fighter Pilot*. Stanford, CA: Hoover Institution Press, 1995.
- U.S. Naval War College. *Commander's Estimate of the Situation: Instructional Worksheet for In-class Work/War Gaming*. Joint Military Operations Department, Naval War College (NWC) 4038. Newport, RI: June, 1995 (Revised March, 1996).
- . "Joint Maritime Operations Syllabus, February 2010," Joint Military Operations Department, Naval War College. Newport, RI: 2010.
- . *Joint Operation Planning Process (JOPP): Instructional Workbook for In-class Work/Wargaming*. Joint Military Operations Department, Naval War College (NWC) 4111H. Newport, RI: 2008.

---

U.S. Navy. Office of the Chief of Naval Operations. *Maritime Operations at the Operational Level of War*. Naval Warfare Publication (NWP) 3-32. Washington, DC: Department of the Navy, CNO, 2008.

———. *Naval Manual of Operational Planning*. Washington, DC: Department of the Navy, CNO, 1948.

Vego, Milan N. *Joint Operational Warfare*. Newport, RI: U.S. Naval War College, 2009.

———. “Obsessed with Tactics.” *Armed Forces Journal*, May, 2008.  
<http://www.afji.com/2008/05/3434637> (accessed 20 February 2010).

Waghelstein, John D. and Chisholm, Donald. *Analyzing Insurgency*, Newport, RI: Navy War College Press, 2006.

Winter, Dr. Donald C., Secretary of Navy. Current Strategy Forum address. Naval War College, Newport, RI, 13 June 2006.